

**REMARKS**

Claims 22, 23, 25-27 and 29-43 remain in this application.

**SOME OF THE REJECTIONS IN THE OFFICE ACTION ARE INCOMPLETE,  
AND THEREFOR IT WOULD BE INAPPROPRIATE TO MAKE THE NEXT  
OFFICE ACTION FINAL**

In the rejection of claims 39, 41 and 42 as unpatentable over Jay et al. in view of Cadman et al., Weirich, Ichikawa et al., and Yie, paragraphs 10 and 11 of the action, the examiner has explained how, at least in his opinion, Yie teaches a pressure relief valve, and that it would have been obvious to provide a valve such as that of Jay et al. with a piston rod such as taught by Yie in order to help align the piston and spring. But there are many other differences between the base reference to Jay et al. and the structure recited in claims 39, 41 and 42 which are not in any way met or explained to be obvious in view of the prior art. And this rejection does not refer to any other rejections, or in any way explain how the references to Cadman et al., Weirich and Ichikawa et al. relate to the structure recited in claim 39, 41 and 42.

In the rejection of claim 40 as unpatentable over Jay et al. in view of Cadman et al., Weirich, Ichikawa et al., and Lindeboom, paragraphs 12 and 13 of the action, the examiner has explained how, at least in his opinion, Lindeboom teaches a pressure actuated valve comprising a piston operated by a conical spring, and that it would have been obvious to provide a valve such as that of Jay et al. with a conical spring such as taught by Lindeboom as an alternative biasing mechanism. But again, there are many other differences between the base reference to Jay et al. and the structure recited in claim 40 which are not in any way met

or explained to be obvious in this rejection. And this rejection does not refer to any other rejections, or in any way explain how the references to Cadman et al., Weirich and Ichikawa et al. relate to the structure recited in claim 40.

In the rejection of claim 26 as unpatentable over Jay et al. in view of Cadman et al., Weirich, Ichikawa et al., and Lauer et al., paragraphs 14 and 15 of the action, the examiner has explained how, at least in his opinion, Lauer et al. teaches a pressure control valve comprising a valve holder 14 and a valve insert joined together by caulking, and that it would have been obvious to provide a valve such as that of Jay et al. with caulking as a joining method as taught by Lauer et al. as a joining method of valve assembly. But here again, there are many other differences between the base reference to Jay et al. and the structure recited in claim 26 which are not in any way met or explained to be obvious in view of the prior art. And this rejection does not refer to any other rejections, or in any way explain how the references to Cadman et al., Weirich and Ichikawa et al. relate to the structure recited in claim 26.

#### **FURTHER REMARKS REGARDING THE PRIOR ART REJECTIONS**

Figure one of the drawings shows at most six elements of structure which go to make up this invention. And moreover, none of the claims recite more than five elements of structure, although these five elements of structure are recited with some detail and they are interrelated with some amount of detail. And yet, even with this few number of structural elements, the examiner has had to use either four or five references to piece together all of the details of these five elements of structure. It has always been axiomatic in patent law that as

an invention becomes sufficiently complicated, any number of references can be used to make a valid rejection. But it is also the case that for a simple invention, such as this one with only five elements of structure, although with a large amount of detail of these five elements and their relationship, a large number of references points toward allowability.

With regard to the specific rejections, the examiner rejected claim 22 as anticipated by Cadman et al. By this amendment, claim 22 has been revised so that it now recites that the invention “**consists of**”, i.e. consists **only** of:

- a **single** piece valve holder,
- a **single** piece valve insert,
- a **single** piece valve piston,
- a compression spring, and
- a **single** piece adjusting shim.

Thus, by recitation of “consisting of,” claim 22 is limited to only those elements of structure which are actually recited in the claim. In contrast to this, Cadman et al. has many other elements of structure. And therefore Cadman et al. does not meet the limitations as now recited in claim 22. To meet the requirements of a claim such as claim 22, it would have to be possible to eliminate all of the additional elements from Cadman et al. and still have an operative device. And this is not possible.

For example, making the piston of Cadman et al. a single piece would mean eliminating the seals 49, and the bolts shown at the bottom of the piston. But making the piston of Cadman et al. without seals 49 would mean that the piston would not seal when and

where it is supposed to seal. Furthermore, making the piston of Cadman et al. without the bolt shown at its bottom would not be possible as it would immediately fall apart.

Further, claim 22 now recites that the valve holder is a one piece element. This is clearly not true of Cadman et al., not even in the embodiment of figure 2. In the rejections the examiner calls element 33 a valve holder, element 30 a valve insert, 48 a valve piston, 50 a compression spring, and 47 an adjusting shim. But this belies the fact that most of these elements are not single piece elements.

For example, within the teaching of Cadman et al. the device will not be operative without the additional structure of the gaskets 49 at the top and bottom of the piston, as well as the second “shim” 46 at the bottom of the piston. Also, to operate as Cadman et al. discloses, the device needs the end cap 31, as shown in figure 2.

Accordingly, the reference to Cadman et al., especially as now amended, does not meet the limitations of claim 22.

The examiner has also rejected claims 22, 23 and 31 as unpatentable over Jay et al. in view of Cadman et al. and Ichikawa et al. For this rejection the examiner relies on elements 14 and 15 of Jay et al. being a valve holder, element 11 being a piston, element 10 being an insert, and element 25 being a shim. But it is pointed out the element 11 of Jay et al. is a shoulder of element 10. It is a shoulder which is located between the cylindrical surface 13 and the larger cylindrical surface of the insert 10. Element 11 cannot be a piston as indicated by the examiner. Perhaps the examiner meant to call element 26 a piston? But in any event, this still does not work as part of a rejection, since claims 22 and 31 both recite that the valve

holder is a single piece, whereas the valve holder as specified by the examiner is two pieces, 14 and 15.

The examiner has gone on to indicate that Cadman et al. teaches a valve holder and valve insert, and that it would have been obvious to replace the valve holder and insert of Jay et al. with these elements as taught by Cadman et al. But this also leads to problems for the rejection in that in Jay et al. the holder is two pieces 14 and 15, and if such a holder were to be replaced by the similar elements in Cadman et al. this would be ends 33 and 31. Thus, clearly such a substitution does not result in a “single piece” holder as now recited in claims 22 and 31.

The examiner has gone on to say that it would have been obvious to provide the valve of Jay et al. with flat surfaces on the outer circumference of the piston as taught by Ichikawa et al. Finally, the examiner has indicated that finding the optimum number of flat surfaces would have been an obvious variation. In other words, even finding a reference with flat surfaces does not result in the structure as recited in claims 22 and 31. Effectively, the examiner has modified the number of surfaces of Ichikawa et al., and then applied this modified teaching to the structure of Jay et al. If the surfaces are not correct with a single modification, it is clearly outside the bounds of obviousness under 35 USC 103 to modify a teaching and then have to further modify this modification. And this is what the examiner has done in this rejection.

Further, for the rejection of claims 31 and 23, the examiner has had to make an even further modification of the modification, in that Jay et al. never teaches three flat faces, whereas claim 31 recites this limitation. Again, it is simply not obvious under the meaning of

35 USC 103 to modify a modification, and the rejection of these two claims requires two such modifications.

The examiner rejected claims 25, 27, 29, 30, and 32-38 as unpatentable over Jay et al. in view of Cadman et al., Weirich and Ichikawa et al. In other words, four references to meet the limitations of claims which are limited to “**consisting of**” only five elements of structure, see claim 36 line 1. Furthermore, four of these elements of structure are limited to being single piece elements, and the fifth element is a compression spring. As pointed out above with respect to claims 22 and 31, it is beyond being obvious to apply four references to meet the limitations of claims which are limited to only “consisting of” five elements of structure, and especially wherein four of those five elements are limited to being “single piece” items.

Further, the examiner has indicated that elements 14 and 15 of Jay et al. comprise a valve holder. Then the examiner has gone on to say that replacing the valve holder (14 and 15) of Jay et al. with a valve holder such as that of Cadman et al. would have been obvious. But if the elements 14 and 15 of Jay et al. are to be replaced by structure from Cadman et al., such structure would have to be elements 31 and 33 of Cadman et al., as without this entire replacement the structure the examiner is trying to piece together would not have the necessary elements to hold it together, and it would fall apart and not work.

These claims also specify that the valve holder is “cup shaped”. But there is no way that the elements 14 and 15 of Jay et al., or elements 31 and 33 of Cadman et al. can be considered to be “cup shaped”. Thus, the rejection which has been set forth by the examiner fails to meet the limitations of the very first element recited, that the valve holder is “cup shaped”.

The examiner refers to element 11 as a piston, but clearly it is not.

The examiner has also relied on Ichikawa et al. as showing flat faces as at least part of the outside surfaces of the piston. The examiner indicates that it would have been obvious to have provided three flat faces, saying that determining an optimum number would have been obvious. Again, the examiner has made a modification and then gone on to modify this modification. Clearly this goes beyond the realm of obviousness under the meaning of 35 USC 103.

The examiner rejected claims 39, 41 and 42 as unpatentable over Jay et al. in view of Cadman et al., Weirich, Ichikawa et al. and Yie.

At this point the examiner has relied on five references to meet the limitations of claims which are limited to “consisting of” only five elements of structure, four of which are “single piece” elements. It is not seen how such a rejection can be held to be obvious. With such non-complex structure being recited by the claims, how can it be considered to be obvious to require five references to meet the limitations of five elements of structure, four of which are single piece?

Further, the examiner has set forth the rejection in paragraphs 10 and 11, but under the explanation of rejection in these two paragraphs, the only statement of obviousness is that it would have been obvious to have provided Jay et al. with a piston rod as taught by Yie. In other words, as set forth in paragraphs 10 and 11, the only explanation is of how Jay et al. and Yie are placed together. There is no explanation of why the references to Cadman et al., Weirich and Ichikawa et al. are included in this rejection.

It is applicants' position that these three references do not teach anything which makes the rejection of these claims obvious.

In paragraphs 12 and 13 the examiner rejected claim 40 as unpatentable over Jay et al. in view of Cadman et al., Weirich, Ichikawa et al. and Lindeboom.

Again the examiner has had to rely on five references to meet the limitations of claims which are limited to "consisting of" only five elements of structure, four of which are "single piece" elements. It is not seen how such a rejection can be held to be obvious. With the non-complex structure which is recited by the claims, how can it be considered to be obvious when five references are required to meet the limitations of five elements of structure, four of which are single piece?

Further, the examiner has set forth the rejection in paragraphs 12 and 13, but under the explanation of rejection in these two paragraphs, the only statement of obviousness is that it would have been obvious to have provided Jay et al. with a conical spring as taught by Lindeboom. In other words, as set forth in paragraphs 12 and 13, the only explanation is of how Jay et al. and Lindeboom are combined. There is no explanation of why the references to Cadman et al., Weirich and Ichikawa et al. are included in this rejection.

It is applicants' position that these three references do not teach anything which makes the rejection of these claims obvious.

In paragraphs 14 and 15 the examiner rejected claim 26 as unpatentable over Jay et al. in view of Cadman et al., Weirich Ichikawa et al. and Lauer et al.

And here again the examiner has relied on five references to meet the limitations of claims which are limited to "consisting of" only five elements of structure, four of which are



“single piece” elements. It is not seen how such a rejection can possibly be considered to be obvious. With the non-complex structure which is recited by the claims, how can it be considered to be obvious when five references are required to meet the limitations of five elements of structure, four of which are single piece and the fifth element is a simple compression spring?

The examiner has set forth the rejection of claims 26 in paragraphs 14 and 15, but under the explanation of rejection in these two paragraphs, the only statement of obviousness is that it would have been obvious to have provided Jay et al. with a caulked joint as taught by Lauer et al. In other words, as set forth in paragraphs 14 and 15, the only explanation is of how Jay et al. and Lauer et al. are combined. There is no explanation of why the references to Cadman et al., Weirich and Ichikawa et al. are included in this rejection.

It is applicants' position that these three references do not teach anything which makes the rejection of these claims obvious.

The examiner rejected claims 36 and 43 as unpatentable over Jay et al. in view of Cadman et al., Platt et al. and Ichikawa et al.

In this rejection the examiner has indicated elements 14 and 15 of Jay et al. to be a valve holder. If this valve holder is to be replaced by structure of Cadman et al., the only obvious way to replace this structure would be with elements 31 and 33 of Cadman et al. If elements 14 and 15 are removed from Jay et al., it is only logical that they would be replaced by elements 31 and 33 of Cadman et al.

The examiner has indicated providing flat surfaces in view of the teaching of Ichikawa et al., but then has gone on to modify this modification by indicating that then this

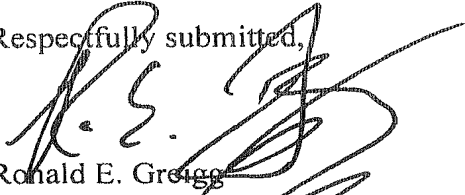
must be modified by finding the optimum number of surfaces. It could be granted that in ordinary circumstances finding an optimum number of surfaces might be obvious, it clearly is not obvious to modify a previous modification as has been done by this rejection. Such complex modifications are clearly not within the meaning of 35 USC 103, and especially not when dealing with simple structure such as recited in applicants' claims, five elements of structure, four of which are recited to be a "single piece" and the fifth being a simple compression spring.

Moreover, the specification, particularly at paragraph 6, recites the particular advantages of the making the valve of the present invention of a very limited number of parts. The advantages obtained by limiting the number of parts of the valve are described for the first time in this application, and are particularly advantageous, in that the valve becomes easier and cheaper to make, and operates with far less breakdowns than such a valve of the prior art. By being "simple" the valve performs its function without the complications created by a more complex arrangement.

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For all of the above reasons, whether taken singly or in combination with each other, entry of this amendment and allowance of the claims are courteously solicited.

Respectfully submitted,



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